

Touchscreen controllers feature industry's best tracking of gloved fingers

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Cypress Semiconductor Corp. today announced that its TrueTouch Gen4 touchscreen controller family now delivers multiple new advanced features, including the world's best tracking of gloved fingers on capacitive touchscreens. Gen4 enables accurate navigation of touchscreens even with thick gloves on, greatly improving convenience for users of smartphones and other portable electronics.

The Gen4 family now also offers new functionality including passive stylus support to capture handwriting and signatures accurately and proximity detection that senses an object approaching the touchscreen and powers down the display before contact to avoid accidental touches. The capacitive-based proximity detection feature eliminates the need for infrared (IR) sensors and provides significant cost savings. These advanced features supplement Gen4's best-in-class water rejection and seamless operation in [noisy environments](#).

The Gen4 TMA467 controller tracks up to 10 fingers in thin gloves and two fingers with thicker gloves, such as those used by skiers. It delivers best-in-class accuracy and linearity for gloves of different materials and thicknesses. It automatically switches between glove and finger tracking without any intervention.

"These advanced features continue to deliver a better user experience for our customers' products," said John Carey, Senior Director of TrueTouch Marketing at Cypress. "Our customers have long been swamped with complaints. Take a skier, who wants to use a phone on the

slopes without removing his or her gloves. With Gen4's proprietary technology, problem solved."

The Gen4 TMA468 controller supports passive styli with tips as small as 2 mm, enabling touchscreens to capture characters as small as 7 mm. This capability is important for writing in languages that require enhanced character recognition for reliable text input, such as Chinese and Japanese. The controller delivers a high degree of accuracy and linearity, along with the fast refresh rates required for handwriting and signature capture.

The Gen4 TMA466 controller's proximity sensing detects objects such as a user's face up to 25 mm away from the screen and disables detection when a user is on a call in case their face touches the screen. It also instructs the host to turn off the display to save power and prolong battery life. This eliminates the need for standalone IR proximity sensors and reduces system costs.

The Gen4 family delivers an array of technologies that competing solutions cannot match. Gen4 utilizes Cypress's patented ability to execute both self-capacitance and mutual-capacitance measurements in the same device—and switch dynamically between the two in application. This ability enables glove tracking, stylus support, and face detection features, as well as TrueTouch's unrivaled water rejection capability.

Gen4 is the world's only controller family with a built-in 10V transmitter to drive the touch panel at 10V. Because signal-to-noise ratio (SNR) is directly proportional to the voltage at which the panel is driven, this technology allows Gen4 solutions to sense smaller signals than competitors in the presence of high noise sources, eliminating disruptions in performance. Gen4 controls touchscreens up to 6 inches in

smartphones, superphones, digital cameras, and media players, and touchscreens up to 10.1 inches in e-readers and tablets.

More information: www.cypress.com/touch/

Provided by Cypress

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